(4) the authority recited to support the requirement to elect a single sequence, MPEP 823.04, does not exist, (5) in the event that the Examiner intended to recite MPEP 803.04 as authority to support the requirement to elect a single sequence, that section relates to nucleotide sequences encoding different proteins whereas the claims of Groups I and II are directed to IL-15 and IL-15 muteins, (6) the restriction of sequences is more properly an election of species requirement, and (7) the claimed sequences are related and it would not be an serious burden on the Examiner to search and examine them together.

In view of the above remarks, Applicants respectfully request reconsideration and withdrawal of the requirement for restriction between Groups I and II, and the requirement to elect a single sequence. Applicants note that the relationship between the claims of Groups I and II and the claims of Groups III-XXX is that of product and process.

Amendment of Claims

Please enter the following amendment. A marked up version of each rewritten claim is shown in the Appendix entitled "VERSION WITH MARKINGS TO SHOW CHANGES."

In the Claims

Please amend claims 47-54 by rewriting such claims as shown in the clean version below. Please add new claims 56-63 as shown in the clean version below. The following is a clean version of the entire set of pending claims (26-63) pursuant to 37 CFR § 1.121(c)(3).

26. An antagonist of interleukin-15 (IL-15) activity comprising IL-15, or a mutein of IL-15, conjugated with a chemical group that sterically interferes with the ability of IL-15 to transduce a signal through the IL-15 receptor complex.

27. The antagonist of claim 26 wherein native IL-15 is conjugated with a chemical group that sterically interferes with the ability of IL-15 to transduce a signal through the IL-15 receptor complex.

28. The antagonist of claim 27 wherein the native IL-15 has the sequence of amino acids 49-162 of SEQ ID:1 or 49-162 of SEQ ID:2.

29. An antagonist of interleukin-15 (IL-15) activity comprising native IL-15 having the sequence of amino acids 49-162 of SEQ ID:2 conjugated with a chemical group that sterically interferes with the ability of IL-15 to transduce a signal through the IL-15 receptor complex.

30. The antagonist of claim 26 wherein a mutein of IL-15 is conjugated with a chemical group that sterically interferes with the ability of IL-15 to transduce a signal through the IL-15 receptor complex.

31. The antagonist of claim 30 wherein the mutein comprises at least one deletion or substitution with a different naturally-occurring amino acid residue at a position corresponding to amino acid residue Asp^{56} or Gln^{156} of SEQ ID NOs: 1 or 2.

32. An antagonist of interleukin-15 (IL-15) activity comprising a mutein corresponding to amino acids 49-162 of SEQ ID:2, wherein either or both of Asp^{56} or Gln^{156} are substituted with serine or cysteine, conjugated with a chemical group that sterically interferes with the ability of IL-15 to transduce a signal through the IL-15 receptor complex.

33. The antagonist of claim 32 wherein Asp^{56} is substituted with serine or cysteine.

34. The antagonist of claim 32 wherein Gln^{156} is substituted with serine or cysteine.

35. The antagonist of claim 26 wherein the IL-15 or mutein of IL-15 is covalently bonded to a large inert moiety selected from the group consisting of PEG, mPEG, PVP, dextran, PVA, poly amino acids, albumin, and gelatin.

36. The antagonist of claim 35 wherein the large inert moiety is selected from the group consisting of PEG, PVP, and dextran.

37. The antagonist of claim 36 wherein the large inert moiety is PEG having a molecular weight between about 1000 and about 20,000.

38. The antagonist of claim 28 wherein the IL-15 is covalently bonded to PEG having a molecular weight between about 1000 and about 20,000.

39. The antagonist of claim 31 wherein the mutein is covalently bonded to PEG having a molecular weight between about 1000 and about 20,000.

40. The antagonist of claim 37 wherein the PEG has a molecular weight of about 5000.

41. The antagonist of claim 37 wherein the PEG is selected from the group consisting of SS-PEG, SC-PEG, SPA-PEG, VS-PEG, and Mal-PEG.

42. The antagonist of claim 41 wherein the PEG is SC-PEG.

43. A composition comprising a pharmaceutically acceptable carrier or diluent and an antagonist according to claim 26.

44. A composition comprising a pharmaceutically acceptable carrier or diluent and an antagonist according to claim 28.

45. A composition comprising a pharmaceutically acceptable carrier or diluent and an antagonist according to claim 31.

46. A composition comprising a pharmaceutically acceptable carrier or diluent and an antagonist according to claim 37.

47. (Amended) The method of claim 60 wherein the patient has symptoms of organ transplant rejection, graft-versus-host disease, autoimmune disease, rheumatoid arthritis, inflammatory bowel disease, lymphoma, carcinoma, leukemia, rhabdosarcoma, a dermatologic disorder, a disorder of the gastrointestinal tract, insulin-dependent diabetes mellitus, an ocular disorder, idiopathic nephrotic syndrome/idiopathic membranous nephropathy, or HTLV I-induced adult T-cell leukemia-lymphoma.

48. (Amended) The method of claim 60 wherein the patient has symptoms of rheumatoid arthritis, lymphoma, carcinoma, leukemia, or a dermatologic disorder.

49. (Amended) The method of claim 61 wherein the patient has symptoms of rheumatoid arthritis, lymphoma, carcinoma, leukemia, or a dermatologic disorder.

50. (Amended) The method of claim 62 wherein the patient has symptoms of rheumatoid arthritis, lymphoma, carcinoma, leukemia, or a dermatologic disorder.

51. (Amended) The method of claim 63 wherein the patient has symptoms of rheumatoid arthritis, lymphoma, carcinoma, leukemia, or a dermatologic disorder.

52. (Amended) The method of claim 61 wherein the composition is administered to a patient having the symptoms of graft-versus-host disease or to prolong allograft survival.

53. (Amended) The method of claim 62 wherein the composition is administered to a patient having the symptoms of graft-versus-host disease or to prolong allograft survival.

54. (Amended) The method of claim 63 wherein the composition is administered to a patient having the symptoms of graft-versus-host disease or to prolong allograft survival.

55. A method for making the antagonist of claim 26 comprising conjugating IL-15 or a mutein of IL-15 with a chemical group that sterically interferes with the ability of IL-15 to transduce a signal through the IL-15 receptor complex.

56. (New) A method for reducing IL-15 activity comprising administering a composition according to claim 43.

57. (New) A method for reducing IL-15 activity comprising administering a composition according to claim 44.

58. (New) A method for reducing IL-15 activity comprising administering a composition according to claim 45.

59. (New) A method for reducing IL-15 activity comprising administering a composition according to claim 46.

60. (New) A method according to claim 56 wherein the composition is administered to a patient in need of such treatment.

61. (New) A method according to claim 57 wherein the composition is administered to a patient in need of such treatment.

62. (New) A method according to claim 58 wherein the composition is administered to a patient in need of such treatment.

63. (New) A method according to claim 59 wherein the composition is administered to a patient in need of such treatment.

Remarks

Claims 26-63 are pending. The amended and added claims are supported generally throughout the specification and claims as originally filed, for example, at page 1, lines 10-11, at page 3, lines 17-26, at page 13, lines 34-36, and by Example 4 at pages 19-20. No new matter has been added.